

**ABSTRACT OF THE INVENTION**

This invention provides a method of modulating translation termination efficiency of mRNA and/or promoting degradation of aberrant transcripts. Also, this invention provides a method of screening for a drug active involved in enhancing translation termination and a method for identifying a disease state involving defective the protein complex.

This invention provides a purified complex comprising an amount of MTT1, human Upf1p, a peptidyl eucaryotic release factor 1 (eRF1) and a peptidyl eucaryotic release factor 3 (eRF3) effective to modulate translation termination. Further, this invention provides an expression vector which comprises a nucleic acid encoding a MTT1, a human Upf1p protein, a peptidyl eucaryotic release factor 1 (eRF1) and a peptidyl eucaryotic release factor 3 (eRF3) operably linked to a regulatory element.

This invention provides an antibody which binds to the complex comprising an amount of a MTT1, human Upf1p protein, a peptidyl eucaryotic release factor 1 (eRF1) and a peptidyl eucaryotic release factor 3 (eRF3) effective to modulate translation termination. This invention provides an agent which inhibits or modulates the binding of MTT1 to eRF3. The agent may inhibit or facilitate the binding of MTT1 to eRF3.